



Unilateral epididymo-orchitis: a rare complication of MMR vaccine

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ABSTRACT

We report the case of an 18-year-old male patient with epididymo-orchitis following MMR vaccine. Salivary gland involvement, meningitis/encephalitis are well-known complications of the MMR vaccine, but involvement and infection of the testis is a rarity. A search for this complication on the medical databases showed no reported cases in the UK.

KEYWORDS

MMR vaccine – Epididymo-orchitis

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An 18-year-old male presented with a day history of gradually worsening painful right scrotal swelling. He denied any urinary complaints, *i.e.* dysuria, urethral discharge, *etc.* There was no history to suggest a sexually transmitted infection. This young man was a premature baby born at 28 weeks and had succumbed to ARDS/patent

ductus arteriosus which was accordingly treated. He had had a right-sided inguinal hernia and hydrocoele which were repaired, the first at age 1 year and the other at the age of 14 years, respectively. Interestingly, when he presented to the urology department he had received his late school MMR vaccine 12 days previously. Three days following



Figure 1 Ultrasound scan of the scrotum showed a swollen and oedematous right testis and epididymis

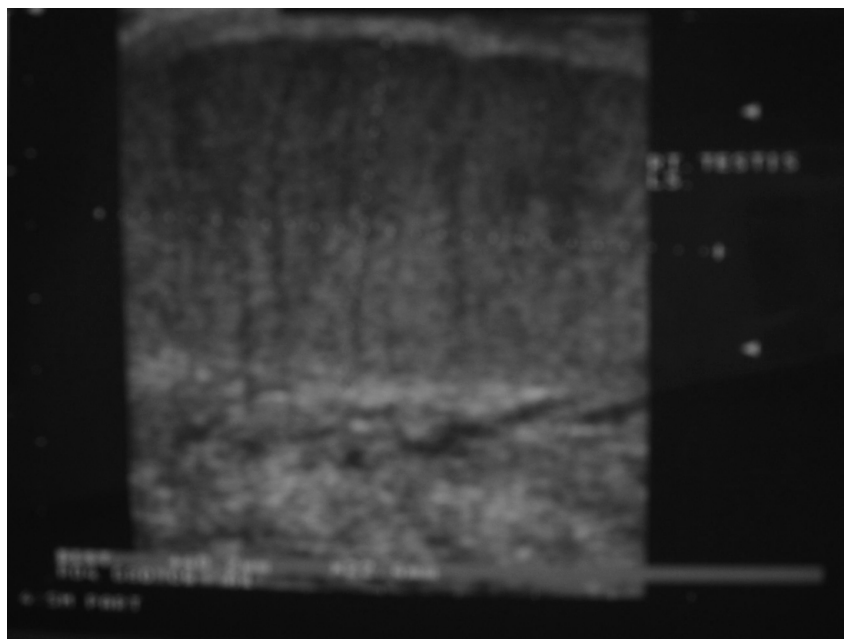


Figure 2 Ultrasound scan of the scrotum showed a swollen and oedematous right testis and epididymis

vaccination, he developed bilateral submandibular swelling which resolved spontaneously; 8 days later, it developed into a painful, unilateral, scrotal swelling.

On admission, he was pyrexial with a temperature of 38.2°C, with right hemiscrotal swelling and tender testicular enlargement, the left testis and cord being normal. The white cell count was raised at 11,700 per cm and a C-reactive protein of 27. Urine microscopy was normal. Blood and urine cultures showed no significant growth. An ultrasound scan of the scrotum showed a swollen and oedematous right testis and epididymis, features consistent with epididymo-orchitis (Figs 1 and 2). There was normal testicular perfusion on Doppler studies.

The patient was treated with non-steroidal anti-inflammatories. As his condition markedly improved by the next day, he was discharged home. On a follow-up out-patient appointment, his testicular swelling as well as his symptoms had all resolved and he was discharged with no further follow-up.

Discussion

This case of unilateral epididymo-orchitis is a rare complication of MMR vaccination with freeze-dried, live, attenuated mumps virus of the Jeryl Lynn Level B strain. Although parotitis (salivary gland involvement) and meningitis/encephalitis are well-known complications after the vaccine, involvement and infection of the testis is a

rarity. Salivary gland enlargement and inflammation is transient and a spontaneous recovery is usual. Very rarely, a dense scarring and stricturing results with its potential complications depending on the organs involved. In extreme cases of orchitis, it can give rise to testicular atrophy and result in reduced fertility for which corticosteroids and interferon have been used with variable results. It was evident in our reported case that this young man developed salivary gland inflammation after 3 days and orchitis 8 days later. A search for this complication of orchitis on the medical databases showed no reported cases in the UK. Five cases have been reported in Germany to date¹ and 11 in Japan.^{2,5} In our literature search, there was insufficient evidence from the reported cases to suggest that this complication was due to inadequate attenuation of the virus in the vaccine. Whatever the cause may be, awareness of this condition is imperative so that appropriate management advice can be given.

References

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